

FEDERAL GRANT OPPORTUNITIES

updated 8/20/10

new opportunities or changes highlighted

Open grants & deadlines:

- **FY 2009 Global Climate Change Mitigation Incentive Fund (GCCMIF)**
- **Federal Loan Guarantees for Projects that Employ Innovative Energy Efficiency, Renewable Energy, & Advanced Transmission & Distribution Technologies** *(September 14, 2009-August 24, 2010; November 13, 2009-December 31, 2010)*
- **Photovoltaic (PV) Manufacturing Initiative** *(Questions Due; September 27, 2010; Full Application Due Date: October 10, 2010)*
- **Green Building Self-Assessment Tool** *(August 27, 2010)*
- **Energy Efficiency and Renewable Energy Program (EEREP)** *(September 10, 2010)*
- **Pakistan - Biomass Cogeneration at Bulleh Shah Paper Mill** *(Due Date: September 15, 2010)*
- **Pakistan - Beaconhouse Schools Solar Photovoltaic Power Systems** *(Application due: September 1, 2010)*
- **Assistance to High Energy Cost Rural Communities** *(September 8, 2010)*
- **Advanced Hydropower Technology Development and Deployment** *(September 17, 2010)*
- **Smart Grid / Renewable Energy Pilot Projects – Costa Rica** *(September 3, 2010)*
- **Capacity Building for Central American Regional Energy Integration** *(September 3, 2010)*
- **Agriculture and Food Research Initiative – Sustainable Bioenergy** *(September 15, 2010)*
- **Energy Production with Innovative Methods of Geothermal Heat Recovery** *(Pre-application due October 1, 2010, Application due November 30, 2010)*

FY 2009 Global Climate Change Mitigation Incentive Fund (GCCMIF)

- Applications due: Rolling basis
- Visit <http://www.eda.gov/> for additional information and for any programming changes
- GCCMIF established to strengthen the link between economic development and environmental quality
- GCCMIF finances projects that foster economic development by advancing the green economy in distressed communities
- Applications are competitive, based on the Economic Development Association's standard eligibility and distress criteria, investment policy guidelines, and funding priority considerations
- Projects must achieve the same job and capital investment outcomes as traditional EDA investments
- Project must be one of the following:
 - Renewable energy (wind, solar, biomass, and geothermal)
 - Energy efficiency
 - Reuse/Recycling/Restoration (reuse of a given product or production of a new or innovative product for recyclable materials; also includes ecosystem restoration)
 - Green building (new construction or renovation certified by USGBC in LEED or comparable certificate program)
- Must result with outputs:
 - Development and/or manufacture of green end-product that furthers or contributes to sustainability and/or environmental quality (activity, item, plan, or program)
 - Greening of an existing function or process (investments that result in green enhancements to the resource, energy, water, and/or waste efficiency of an existing function or process)
 - Creation or renovation of a green building

ARRA - Federal Loan Guarantees for Projects that Employ Innovative Energy Efficiency, Renewable Energy, & Advanced Transmission & Distribution Technologies

Funding Opportunity Announcement (FOA) # DE-FOA-0000140

- Application due dates:
 - Parts I & II submission dates depend on rounds
 - Part I: September 14, 2009 – August 24, 2010
 - Part II: November 13, 2009 – December 31, 2010
- Submission of applications for loan guarantees under Title XVII of the Energy Policy Act of 2005 in support of debt financing for projects in the U.S. that employ energy efficiency, renewable energy, and advanced transmission and distribution technologies that constitute new or significantly improved technologies that are not a commercial technology
- DOE will make up to \$8.5 billion in loan guarantee authority available
- Despite the due dates, the solicitation will remain open until the aggregate \$8.5 billion in loan guarantee authority is fully obligated
- Visit <http://www.fedconnect.net/> to view the full FOA, and consult <http://www.energy.gov/>, <http://www.whitehouse.gov/omb/> or <http://www.recovery.gov/> for additional information
- Only 3 categories of projects that begin construction no later than 9/30/11 are eligible under Section 1705 of Title XVII and may have their credit subsidy costs covered by appropriated funds under the Recovery Act
 1. Renewable energy systems, including incremental hydropower, that generate electricity or thermal energy and facilities that manufacture related components
 2. Electric power transmission system projects, including upgrading projects
 3. Leading edge biofuel projects that will use technologies performing at the pilot or demonstration scale that the Secretary determines are likely to become commercial technologies and will produce transportation fuels that substantially reduce life-cycle greenhouse gas emissions compared to other transportation fuels
- Eligible projects in categories listed below and which fall within 1 of the 2 distinct project types described:
 1. Alternative fuel vehicles
 2. Biomass
 3. Efficient electricity transmission, distribution, and storage
 4. Energy efficient building technologies and applications
 5. Geothermal
 6. Hydrogen and fuel cell technologies
 7. Energy efficiency projects
 8. Solar
 9. Wind & hydropower

- Technology categories for 1705 eligible projects are limited to renewable energy systems projects, electric power transmission systems projects, and leading edge biofuels projects
- Per DOE, eligible projects under categories 1, 4, 6, & 7 generally do not constitute 1705 eligible projects for which the credit subsidy costs may be paid for out of funds appropriated under the Recovery Act to pay for the costs of loan guarantee issued under the Section 1705 program
- Project types: manufacturing or stand-alone; see FOA for list of primary goals and objectives for these project types

Photovoltaic (PV) Manufacturing Initiative

DE-FOA-0000259

- Questions Due; September 27, 2010
- Full Application Due Date: October 10, 2010
- Registration Requirements
 - Applicants must obtain a DUNS number. <http://fedgov.dnb.com/webform>
 - Applicants must register with the CCR. <http://www.ccr.gov/>
 - Applicants must register with Grants.gov. <http://grants.gov/>
 - Applicants must register with FedConnect. www.fedconnect.net
- Type of Agreement: DOE anticipates awarding cooperative agreements (See Part VI.B.4 Statement of Substantial Involvement), or Technology Investment Agreements (TIAs) under this announcement.
- Estimated Funding: Approximately \$125,000,000 is expected to be available for new awards under this announcement over five years. Approximately \$15,000,000 is expected to be available for new awards in FY 2010 and an additional \$110,000,000 is expected to be available for awards made under this announcement in years FY 2011 through FY2015.
 - DOE anticipates making at least two, and up to five, awards under this announcement depending on the size of the awards.
 - Award size: University Focused: \$12.5M-\$25M, Industry Focused: \$33M-\$100M
- Eligible Applicants: To be eligible to submit a Full Application to this Announcement, Applicants must have submitted a Concept Paper Application to FOA No. DE-FOA-0000237 by the required due date, passed the Concept Paper Application initial compliance review, and received DOE feedback. All domestic applicants were eligible to apply to FOA No. DE-FOA-0000237, except nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995. The following domestic entities are eligible to apply under both topic areas for this announcement: (1) institutions of higher education; (2) nonprofit and for-profit private entities; (3) State and local governments; and (4) consortia of entities (1) through (3). All types of domestic entities are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.
- Cost Sharing
 - Topic I: University-Focused - The cost share must be at least 20% of the total allowable costs for research and development projects (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law. (See 10 C.F.R. Part 600 for the applicable cost sharing requirements.) The mandatory cost share must be achieved on an annual basis.
 - Topic II: Industry-Focused - The cost share must be at least 50% of the total allowable costs (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law.
- Objectives: launch a PV Manufacturing Initiative that will support accelerated development for the U.S. PV industry. Applications under two separate topics are being sought in 2 areas:
 - University-Focused: designed to allow Universities to conduct industry-relevant research and development projects related to PV manufacturing. The University-Focused topic is

intended to provide universities with a competitive funding source to perform industry-relevant R&D, guided by direct industry input and oversight.

- Industry-Focused: designed to allow Industry to accelerate the development and implementation of PV manufacturing-related technologies through both collaborative and non-collaborative models. Intended to provide the U.S. PV industry with a resource to rapidly develop pre-competitive and competitive manufacturing technologies.
- The Industry-Focused topic is intended to also allow for the integration of university and workforce development initiatives; likewise, activities under the University-Focused topic are intended to have explicit industry support.

Green Building Self-Assessment Tool

Solicitation Number: VA70110RP0167

- Description: The Department of Veterans Affairs, National Energy Business Center (VA NEBC), 4141 Rockside Road, Suite 110, Seven Hills, Ohio, 44131 anticipates soliciting offers and subsequently awarding a contract for the data processing, hosting, and other related services necessary to access a sustainability building assessment tool for up to 173 VA sites. The self assessment tool shall be compatible with the third-party existing green building rating systems developed by an ANSI-accredited organization. The tool shall closely match with the Federal High Performance and Sustainable Building Guidance dated 12/1/2008. The contractor shall furnish all services, labor, tools, materials, supplies, and travel, to perform work under this project. The work shall include but not be limited to:
 - Access to a sustainability self-assessment tool compatible with existing third-party green building rating systems developed by an ANSI-accredited organization.
 - Self-assessment tool related assistance upon VA representatives' request.
 - Web-based training to VA representatives.
 - Step-by-step instructions for the assessment tool.
- The solicitation will be issued as a "Request for Proposal" (RFP) conducted in accordance with FAR Parts 13 and 37 and be evaluated in accordance with the procedures therein. The solicitation for data processing, hosting, and other related services will be for the sustainability assessment tool for up to 173 VA sites. The applicable NAICS code is 518210. The solicitation will be issued on or about July 21, 2010 and proposals will be due on or about August 23, 2010 at 4:00PM (EST), at 4141 Rockside Road, Suite 110, Seven Hills, Ohio, 44131. The Government intends to award a firm-fixed-price contract. The period of performance shall be 365 days from the Notice to Proceed issue date. This notice is not a request for competitive offers. Magnitude of Services is expected to be between \$150,000.00 and \$250,000.00. The point of contact is Daniel Bergolc who can be reached by email at daniel.bergolc@va.gov. Questions may be submitted by e-mail to above point of contact. Telephone calls will not be accepted. The VA NEBC reserves the right to use only FBO, via the internet, to provide notification of any amendments to this RFP. It is the contractor's responsibility to view the FBO website daily for any amendments to the RFP.

Energy Efficiency and Renewable Energy Program (EEREP)

Sol# RFA-OAA-10-000009

- Current Closing Date for Applications: September 10, 2010
- Description: The United States Agency for International Development (USAID) is seeking applications for Assistance Agreements for its Energy Efficiency and Renewable Energy Program (EEREP). USAID anticipates awarding two EEREP Leader with Associate Cooperative Agreements, each of 5 years duration.
 - The LWAs will be under two themes: Increasing Energy Efficiency, which will focus on increasing energy efficiency to reduce GHG emissions in developing country economies and Increasing Adoption of Renewable Energy, which seeks to assist developing countries with promoting and establishing an expanded supply of renewable energy systems.
- Subject to the availability of funds, approximately \$2,500,000 will be available for each EEREP LWA Leader Award.
- Associate Awards totaling approximately \$5,000,000 are expected for each Leader Award but actual activity funding will depend on field demand.
- Eligible Applicants: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility"

Pakistan - Biomass Cogeneration at Bulleh Shah Paper Mill

Solicitation Number: 2010-31049A

- Due Date: September 15, 2010
- The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study for Packages Limited to determine the best option to utilize various paper and agricultural wastes from a recently built paper mill for purposes of biomass cogeneration.
- BACKGROUND SUMMARY: Packages Limited, the proposed Grantee, is a publicly traded company based in Pakistan, produces paper and cardboard at its own paper mills, including the Bulleh Shah paper mill at Kasur, 40 kilometers southeast of Lahore, in Punjab. The mill has its own process steam plant and can supply its own electrical demand; however Packages wishes to use the waste generated by the plant to build and operate a biomass cogeneration facility to generate additional electricity for their paper mills and business operations. The waste generated by Bulleh Sah, includes paper pulp sludge, cardboard and paper scrap, as well as aluminum foil and polyethylene sheet trimming wastes. In addition, Packages uses locally sourced wheat straw as a paper component, giving it access to an existing source of agricultural waste. Packages has commissioned several internal and external studies over the last couple of years on the quantities and composition of their waste stream, on preliminary designs for a biomass cogeneration system, and on performance analyses to determine pressures, efficiencies, output in tons of steam and in megawatt. At this point, Packages seeks expert advice from a U.S. company to determine the applicability, size, financial scope and technical requirements of implementing a biomass cogeneration facility. The study will begin with a technical assessment and review of existing options and documentation, followed by a complete project analysis of two options for utilizing waste from the Bulleh Shah paper mill itself and other sources.
- The U.S. firm selected will be paid in U.S. dollars from a \$289,125 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).
- A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and a background definitional mission/desk study report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to:
- <https://www.ustda.gov/businessopps/rfpform.asp>
- Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.
- Only U.S. firms and individuals may bid on this USTDA financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality

requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.

- Interested U.S. firms should submit their Proposal in English directly to the Grantee by 4:00 PM local time in Pakistan, September 15, 2010 at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

Pakistan - Beaconhouse Schools Solar Photovoltaic Power Systems

Solicitation Number: 2010-31044A

- Application due: September 1, 2010
- The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study for Educational Services (Private) Limited / Beaconhouse School System to demonstrate the commercial viability of installing solar photovoltaic power systems at approximately 400 private schools owned or operated by the ESL. Solar power will provide uninterrupted power at a time of frequent load shedding, lower the overall cost of power, and demonstrate science at work to pupils. The objectives of the study are to identify practical photovoltaic designs, demonstrate whether the concept is commercially viable, develop a baseline design which can be adapted to other schools in the system, provide documentation to support filing for permits and tariffs, and provide reassurance to lenders and investors, and to evaluate subsidized tariff options to promote renewable energy sources at commercial sites.
- Educational Services (Private) Limited, a school management company based in Lahore, Pakistan, is the largest private educational company in Pakistan. It owns 150 schools and operates 250 more under franchise, with more than 180,000 students in seven countries. The Beaconhouse Schools brand is owned by ESL, a business whose founders started the Beaconhouse schools network.
- Beaconhouse schools consume around \$1.2 million in electricity costs each year but suffer frequent outages from load shedding. ESL is committed to environmentally sound business practices and established a subsidiary company, Beacon Energy Limited, to set up a 50 MW wind farm near Karachi which is on target to reach financial close by the end of 2010.
- This USTDA funded feasibility study is designed to identify practical photovoltaic designs, demonstrate whether the concept is economically viable and develop a baseline design that can be adapted to other schools in the system and which ESL can use to procure and install a test array. Data and experience from the test installation will help guide the project in developing an implementation plan for the entire Beaconhouse school system. Further, the selected U.S. Contractor will provide documentation to support ESL in filing for permits, an electricity tariff and for use in negotiations for a Power Purchase Agreement (PPA) and Interconnect Agreement with distribution and transmission utilities.
- The U.S. firm selected will be paid in U.S. dollars from a \$299,896 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).
- A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and a background definitional mission/desk study report are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: <https://www.ustda.gov/businessopps/rfpform.asp>
- Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax

verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

- Only U.S. firms and individuals may bid on this USTDA financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.
- Interested U.S. firms should submit their Proposal in English directly to the Grantee by 4:00PM, September 1, 2010 at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

Assistance to High Energy Cost Rural Communities

RD-RUS-HECG10

- Information is also available on Grants.gov under Assistance to High Energy Cost Rural Communities, Catalog of Federal Domestic Assistance (CFDA) Number 10.859.
- All applications must be submitted on or before September 8, 2010.
- Available Funds: \$15.5 million in competitive grants under the Notice of Funding Availability (NOFA): Ceiling: \$5,000,000, Floor: \$75,000 (expected awards: 20)
- For more information: <http://www.usda.gov/rus/electric/hecgp/overview.htm>
 - To apply go to www.grants.gov
- To be eligible to receive a grant under this program:
- You must be an eligible applicant;
 - The grant project must serve an eligible extremely high energy cost community;
 - The proposed project must improve energy generation, transmission, or distribution facilities serving an eligible community; and
 - The administrative costs of the project must not exceed 4 percent of grant funds.
 - A legally-organized for-profit or nonprofit organization such as, but not limited to, a corporation, association, partnership (including a limited liability partnership), cooperative, or trust;
 - a sole proprietorship;
 - a State or local government, or any agency or instrumentality of a State or local government, including a municipal utility or public power authority;
 - an Indian tribe, a tribally-owned entity, an Alaska Native Corporation;
 - an individual or group of individuals; or
 - any of the above entities located in a U.S. Territory or other area authorized by law to participate in programs of the Rural Utilities Service or under the Rural Electrification Act.
- Your community qualifies as an eligible extremely high energy cost community if average home energy costs in the area to be served exceed 275 percent of the national average under one or more RUS high energy cost benchmarks. Eligibility may be established using average annual household expenditures for individual fuels or for total energy, or average per unit cost for home energy.
- Eligible Projects: Grants under this program may be used for the acquisition, construction, installation, repair, replacement, or improvement of energy generation, transmission, or distribution facilities in communities with extremely high energy costs.
- Examples of eligible activities include:
 - Acquisition, construction, replacement, repair, or improvement of:
 - Electric generation, transmission, and distribution facilities, equipment, and materials, including associated and supporting activities; land or right of way acquisition, engineering and professional expenses, permitting costs,
 - Natural gas distribution or storage facilities and associated equipment and activities serving residential customers or community use; or
 - Petroleum product storage and handling facilities serving residential or community use.
 - Renewable energy facilities and systems used for on-grid or off-grid electric power generation, water or space heating, or process heating and power (renewable energy sources include solar, wind, hydropower, or biomass technologies).

- Backup up or emergency power generation or energy storage equipment, included distributed generation installed on consumer premises.
- Implementation of energy efficiency, energy conservation measures such as weatherization of residences and community facilities, energy-efficient or energy saving appliances and devices as part of a coordinated demand management or energy conservation program.
- The above examples are illustrative and are not meant to limit the projects that you may propose in your application. An activity that meets the objectives of providing or improving energy service or reducing the costs of energy services to eligible communities is an acceptable grant.

Advanced Hydropower Technology Development and Deployment

DE-FOA-EE0000406

- This is a Request for Information (RFI) only and not a Funding Opportunity Announcement (FOA). No funding is available with this RFI
- DOE and Reclamation are requesting input from the public on new, advanced hydropower technologies that are ready for demonstration and testing, or that are worthy of additional research and development investments. The term “advanced technology” means products that are not already widely available commercially and that offer substantial energy and environmental benefits to renewable energy portfolios in the U.S.
- RFI Guidelines: The sole purpose of this RFI is to gain input from the public regarding advanced hydropower technologies that are ready for deployment. This does not constitute a request for specific project proposals or for regulatory barriers or project financing issues. The emphasis is on obtaining input on technical challenges and barriers for development of conventional hydro in the U.S.
- Please send your response (one attachment only) via email, with the title, "Hydropower RFI Response" to HydroRFI@go.doe.gov. The response comments should identify the Topic(s) 1, 2 or 3 given in the ‘Requested Information’ paragraph below. Your response should be limited to 3 pages, submitted in Microsoft Word or Adobe PDF as an email attachment to the address above and received no later than 8:00 PM Eastern Daylight Time on 9/17/2010. Please note that this mailbox will accept RFI responses only. Any questions regarding the RFI must be posted on FedConnect, as instructed below.
- Requested Information: DOE-EERE WWPP and Reclamation invite comments and suggestions on all aspects of technology development and demonstrations in the hydropower industry including but not limited to the following three topics:
 - Topic 1: Small Hydro Technology
 - What are the highest priority technology needs for small hydro development?
 - What are the current technological barriers to development of new small hydropower projects? (See SHS summary for examples of current challenges)
 - What are the major gaps between available technologies and advanced technologies that can overcome current barriers?
 - How can new development/R&D activities by DOE, Reclamation, and other federal agencies be designed to help overcome technological barriers?
 - What actions should federal agencies take to accelerate sustainable development of undeveloped small hydro resources in the U.S.?
 - Topic 2: Environmental Mitigation Technology
 - What are the major environmental issues associated with hydropower development in the U.S., and which of these can be addressed through new technology development? (See EMTS summary for examples of current challenges)
 - What new approaches are available for monitoring of the environmental impacts associated with hydropower or the environmental performance of new technologies?
 - What specific technologies are being developed for environmental mitigation and/or what are the technology needs for environmental mitigation for hydro development?
 - What research and development is needed to improve the effectiveness and cost reduction of mitigation measures?
 - Topic 3: Demonstration-Ready Hardware and Software
 - What are the hydro technologies that are being used outside the U.S. and what are the barriers for deployment of these technologies within the U.S.?

- What pre-commercial, advanced designs and deployment methodologies are available for hydro applications including:
 - Low-head applications (5 to 20 feet) with flows 20 to 1000 cubic feet per second (cfs)?
 - Compact bolt-on units that could easily be installed on existing dam outlets or pipelines?
 - Applications in constructed waterways?
- What types of new turbine designs, both within and outside of the above category, are available with enhanced environmental performance characteristics, including:
 - Inline turbines?
 - Turbines with high fish passage survival rates (e.g., 90% or greater)?
 - Turbines with suitable aeration devices with low impact on energy efficiencies for enhancing downstream water quality?
 - Turbines for multiple environmental benefits such as turbines that combine aeration and fish survival rates?
- What types of advanced efficient pump units are used as turbines for small hydro?
- What types of advanced generator designs can efficiently generate for the full range of turbine operation including generators suitable for the above mentioned turbines?
- What types of operations optimization systems and software can be easily integrated with existing operating systems and are practical for real-time unit commitment and efficiency improvements?
- What types of ancillary equipment are available for new hydro development including:
 - In-stream intake and trashrack designs?
 - Advanced hydraulic surge protection methods?
 - Advanced control and protection devices?
- What are the new civil works requirements and technology developments for cost effective, faster hydro project implementation including innovative tunneling technologies?
- What types of sites and industry partnerships should the federal agencies be looking at for future demonstration and testing of these advanced turbines, generators and ancillary equipment?
- What are potential federal and non-federal sites where new technologies could be demonstrated and/or tested?

Smart Grid / Renewable Energy Pilot Projects – Costa Rica

Funding Opportunity Number: DOS-CRI-GR002

- Closing Date for Applications: Sep 03, 2010
- Expected Number of Awards: 2
- Estimated Total Program Funding: \$160,000
- Award Ceiling: \$160,000
- Go to www.grants.gov for additional information
- Eligible Applicants: Eligibility is limited to not-for-profit organizations subject to 501 (c) (3) of the U.S. tax code or comparable provisions in the home country of non-U.S. applicants.
- Description:

The U.S. Department of State's Regional Environmental Hub for Central America and the Caribbean ("Hub"), based at the U.S. Embassy in San Jose, Costa Rica, is pleased to invite applications from prospective grantees to develop pilot projects in Costa Rica demonstrating the viability of smart grid technologies in conjunction with small-scale renewable energy systems. The Hub expects to award one grant of up to \$80,000 for a pilot project in the Greater San Jose metropolitan area and a second grant of up to \$80,000 for a pilot project in the Guanacaste region of Costa Rica. Alternatively, the Hub could award a single grant of up to \$160,000 to an applicant that would develop one pilot project in each of the two specified regions. The Hub is pleased to solicit proposals for up to two (2) pilot projects in Costa Rica under the the "Energy and Environmental Security Initiative" (EESI) that the Hub is carrying out as part of the "Energy and Climate Partnership of the Americas" (ECPA) announced by President Barack Obama at the April 2009 Summit of the Americas. In conjunction with other EESI efforts, these projects offer an opportunity to showcase existing and emerging technologies and highlight potential ways that local, national, and regional authorities might reduce or eliminate long-standing regulatory and legislative hurdles to investments in clean energy, energy efficiency, and/or "smart grid" systems. The grant awardee(s) will carry out funded activities in the Greater San Jose Metropolitan area and/or the Guanacaste region of Costa Rica with the overall goal of incentivizing policymakers in Costa Rica and elsewhere in the region to strengthen the enabling environment for greater investments in smart grids and small-scale renewable energy development. The Hub welcomes innovative approaches to pilot project development that include not only technological solutions but also offer strong opportunities for future public education and outreach to policymakers. The Hub also encourages applicants to partner with relevant public entities and/or private sector organizations to optimize prospects for successful pilot projects. Further details and instructions are available in the Application Package that may be downloaded from this site.

Capacity Building for Central American Regional Energy Integration

Funding Opportunity Number: DOS-CRI-GR001

- Closing Date for Applications: Sep 03, 2010
- Expected Number of Awards: 1
- Estimated Total Program Funding: \$195,000
- Go to www.grants.gov for additional information
- Eligible Applicants: Eligibility is limited to not-for-profit organizations subject to 501 (c) (3) of the U.S. tax code or comparable provisions in the home country of non-U.S. applicants.
- Description

The U.S. Department of State's Regional Environmental Hub for Central America and the Caribbean ("Hub"), based at the U.S. Embassy in San Jose, Costa Rica, is pleased to invite applications from prospective grantees to develop and provide capacity building to promote regional energy integration in Central America, foster harmonized regulatory and legislative frameworks, and to advance clean energy development across the region. The Hub expects to award up to \$195,000, either as a single grant or in multiple grants to an eligible organization to carry out work in the following areas: Regulatory Modernization and Harmonization; Legislative Modernization and Harmonization; Effective Public Communications; and, Translation of Regulations and Laws. As part of the "Energy and Climate Partnership of the Americas" (ECPA), the Hub is implementing the State Department's "Energy and Environmental Security Initiative" (EESI) aimed at helping Central American electricity regulators and other relevant authorities to address such challenges by, inter alia, finding ways to effectively harmonize their national laws and regulations with the regional market scheme that has been developed under the Central America Energy Integration System (SIEPAC). The grant awardee(s) will carry out funded activities over a 24-month period in SIEPAC countries with the goal of strengthening the political will and capacity of relevant entities to modernize and harmonize their respective regulatory and legislative regimes to ensure a fully functional regional electrical market and to better incentivize clean energy and smart grid development. Further details and instructions are available in the Application Package that may be downloaded from this site.

Agriculture and Food Research Initiative – Sustainable Bioenergy

Funding Opportunity Number: USDA-NIFA-AFRI-003042

- For additional information go to http://nifa.usda.gov/funding/rfas/afri_rfa.html
- Current Closing Date for Applications: Sep 15, 2010 This program has multiple deadline dates occurring throughout FY 2010. Please refer to the current Agriculture and Food Research Initiative Sustainable Bioenergy Request for Applications for a complete list of program deadlines. Applications must be received by the date appropriate to the Program Area listed in the FY 2010 Request for Applications.
- Expected Number of Awards: 50
- Estimated Total Program Funding: \$40,000,000
- Award Ceiling: \$40,000,000
- Award Floor: \$0
- Eligible Applicants
 - Public and State controlled institutions of higher education
 - Native American tribal organizations (other than Federally recognized tribal governments)
 - Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education
 - Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education
 - Private institutions of higher education
 - Individuals
 - For profit organizations other than small businesses
 - Small businesses
 - Others (see text field entitled "Additional Information on Eligibility" for clarification)
 - Description
- The Agriculture and Food Research Initiative (AFRI) is the National Institute of Food and Agriculture's (NIFA) flagship competitive grant program and was established under section 7406 of the Food, Conservation, and Energy Act of 2008 (the 2008 Farm Bill). AFRI supports work in six priority areas: plant health and production and plant products; animal health and production and animal products; food safety, nutrition, and health; renewable energy, natural resources, and environment; agriculture systems and technology; and agriculture economics and rural communities. In FY 2010, AFRI is soliciting applications through seven Requests for Applications (RFA). One RFA calls for research projects addressing the above six priority areas. Additional RFAs further address AFRI priority areas in five societal challenge areas. The five challenge area RFAs are: Childhood Obesity Prevention; Climate Change; Food Safety; Global Food Security; and Sustainable Bioenergy. These RFAs will support research, education, and extension to achieve significant, measurable outcomes. NIFA will also release a single, separate NIFA Fellowships Grant Program RFA to fund pre- and postdoctoral fellowship grants in April 2010. This RFA addresses Sustainable Bioenergy.
- Sustainable Bioenergy Challenge Area: This RFA focuses on the societal challenge to secure America's energy future. In the Sustainable Bioenergy Challenge Area RFA, specific program areas are designed to achieve the long-term outcome of reducing the National dependence on foreign oil through the production of sustainable bioenergy. Project types supported by AFRI within this RFA include single-function Research and Education Projects, multi-function Integrated Research, Education, and/or Extension Projects, and Food and Agricultural Science

Enhancement (FASE) Grants. Other sources of NIFA funding for work relevant to the Sustainable Bioenergy Challenge Area are as follows:

- *Biomass Research and Development Initiative* (joint with the Department of Energy (DOE)) Total Program Funds: Approximately \$33 million (\$28 million from NIFA)
- Information will be made available through the NIFA and DOE websites *Plant Feedstock Genomics for Bioenergy* (joint with DOE) Total Program Funds: \$6 million (\$2 million from AFRI) Information is available at www.nifa.usda.gov/fo/plantfeedstock.cfm

Energy Production with Innovative Methods of Geothermal Heat Recovery

DE-FOA-0000336

- Pre-application due October 1, 2010, Application due November 30, 2010
- Registration Requirements: go to <http://www.grants.gov> for more information
 - Applicants must obtain a DUNS number. <http://fedgov.dnb.com/webform>
 - Applicants must register with the CCR. <http://www.ccr.gov/>
 - Applicants must register with Grants.gov. <http://grants.gov/>
 - Applicants must register with FedConnect. www.fedconnect.net
- Estimated Funding: Approximately \$7.5M total is anticipated to be available for new awards in FY2011. An additional \$7.5M total is anticipated for awards made under this announcement in fiscal years FY2011 and/or FY2012. Actual funding levels are subject to Congressional appropriations for the Geothermal Technologies Program (GTP).
- Phase I Ceiling: \$1,000,000, Phase II Ceiling: \$5,000,000 (No Floor)
 - DOE anticipates that awards will be in the \$0.5M range for Phase I, and \$3M range for the total project period, although continuation to Phase II is not guaranteed and actual award amounts are subject to negotiation.
- Expected Number of Awards: In total, DOE anticipates 10-15 awards for Phase I activities under this announcement, depending on the size of the awards. A go/no-go decision point will be included at the end of Phase I prior to continuing to Phase II activities for awards based on criteria developed for each project. DOE retains the option to down-select among projects following Phase I.
- Period of Performance: 3 years
- Eligible Applicants
 - All domestic entities are eligible to apply for this FOA, except nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.
 - Any DOE/National Nuclear Security Administration (NNSA) FFRDC contractor applying as the prime cannot exclusively withhold its services to only its application and must make itself available to other applicants on a non-exclusive basis.
 - Foreign participants will be allowed as sub-recipients only to a domestic applicant provided that: The foreign sub-recipient effort, in aggregate, shall not exceed 33% of the total estimated project costs which includes both the applicant's and the foreign subcontractor's portions of the effort.
- Cost Sharing: The cost share must be at least 20% of the total allowable costs for each phase for research and development projects (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law. (See 10 CFR Part 600 for the applicable cost sharing requirements.) Applicants proposing more than the 20% minimum cost share may receive increased consideration for an award.
- Objective: DOE's objective is to promote geothermal heat recovery technologies that mitigate or preclude potential adverse environmental impacts of geothermal energy development, production or use; include innovative methods for extracting heat; and alleviate financial risks. FOA responses should address:
 - 1) reduction of potential environmental risk factors through:

- reduction or avoidance of risk associated with induced seismicity,
 - reduction or avoidance of the consumption of potable/fresh water, and/or
 - avoidance of contamination of potable/fresh water sources
- 2) innovation in:
- subsurface heat recovery methods
 - other aspects the total system design (e.g. power conversion technologies):
proposed innovative heat extraction methods combined with innovative non-subsurface technology will be considered for funding under this announcement.
- 3) reduction of financial risk by:
- leveraging existing surface or subsurface development knowledge, equipment, facilities, tools and techniques for geothermal energy production
 - adequately addressing environmental risks that have associated financial risks, and/or,
 - developing inherently low cost heat recovery methods
- Phase I/Budget Period 1 Objectives– Feasibility Studies, Component Design and Validation Plan
 - Perform a geospatial assessment of the resource capacity and environmental risk associated with development of the resource.
 - Geospatially locate reservoirs that make up the geologic resource targeted for the proposed heat extraction method and estimate the total domestic resource capacity. Applicants will need to perform a thorough analysis on potential environmental risks/impacts, and provide environmental risk mitigation strategies for the proposed heat recovery methods. Applicants should consider effects on groundwater and local hydrology, estimate the consumption of potable/fresh water for the proposed method, and illustrate the water consumption in relation to water availability in the applicable geographic areas. Finally, if fluids are to be produced from or injected into the subsurface formation to permeate through the rock, provide a spatial representation of the estimated zone where seismicity would be felt by human populations (peak ground accelerations $\geq 1.4\%$ g), using a metric that represents the degree of population exposure to felt seismicity.
 - Phase II/Budget Period 2 Objectives–Component Development and Validation
 - The goal of Phase II is to ready the innovative heat recovery method for full-scale demonstration through component development and validation while ensuring that proposed heat recovery method mitigates/precludes potential adverse environmental impacts. In Phase II, the applicant will develop the component technologies according to their Phase I engineering designs (Phase I, D2). The applicant will then execute the Phase I plan to validate the unproven component technologies at lab and/or pilot scale (Phase I, D3).